

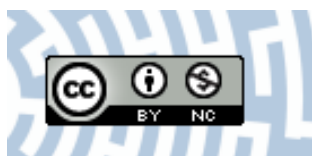


**You have downloaded a document from
RE-BUS
repository of the University of Silesia in Katowice**

Title: Socio-educational contexts of Gāokǎo exam: A qualitative retrospective study of how gāokǎo is perceived by successful exam-takers

Author: Marcin Gierczyk, Rui Diao

Citation style: Gierczyk Marcin, Diao Rui. (2021). Socio-educational contexts of Gāokǎo exam: A qualitative retrospective study of how gāokǎo is perceived by successful exam-takers. „International Journal of Chinese Education” (2021, iss. 2, s. 1-16), DOI:10.1177/22125868211035802



Uznanie autorstwa - Użycie niekomercyjne - Licencja ta pozwala na kopiowanie, zmienianie, remiksowanie, rozprowadzanie, przedstawienie i wykonywanie utworu jedynie w celach niekomercyjnych. Warunek ten nie obejmuje jednak utworów zależnych (mogą zostać objęte inną licencją).



UNIwersYTET ŚLĄSKI
W KATOWICACH



Biblioteka
Uniwersytetu Śląskiego



Ministerstwo Nauki
i Szkolnictwa Wyższego

Socio-educational contexts of Gāokǎo exam: A qualitative retrospective study of how gāokǎo is perceived by successful exam-takers

International Journal of Chinese Education

May-August 2021, 1–16

© The Author(s) 2021

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/22125868211035802

journals.sagepub.com/home/cne**Marcin Gierczyk¹ and Rui Diao²**

Abstract

The Gaokao exam is still a hot topic in contemporary Chinese society designed to select people for the country by testing their knowledge of specific exam subjects. People from all walks of life have different attitudes and understandings towards it. The purpose of this study was to examine how do Chinese female students from Top Universities in China perceive the gāokǎo exam by using a semi-structured, in-depth interview (N = 5) and an open-ended interview questionnaire (N = 7). The findings suggest that an evaluative dichotomy can characterize the exam itself and exam preparation period. Although initially this time was seen in terms of immense sacrifice and was highly intense, positive attitudes to the Gaokao exam dominated, and the exam was considered a relatively fair and equitable selection method. It should be borne in mind that this study does not attempt to be globally representative. However, we do trust that the findings will have a universal appeal to educational communities.

Keywords

education, qualitative study, gāokǎo, educational tests, female students

Received 3 February 2021; accepted 11 July 2021

Introduction

In the last two decades, there has been growing literature on gaokao research from sociological, pedagogical, and gender perspectives. This interest may be because the Gaokao is seen as

¹Institute of Pedagogy, Faculty of Social Sciences, University of Silesia in Katowice, Katowice, Poland

²Institute of Chinese, Jiamusi University, Jiamusi, China

Corresponding author:

Marcin Gierczyk, Institute of Pedagogy, Faculty of Social Sciences, University of Silesia in Katowice, Bankowa 12, 40-007 Katowice, Poland.

Email: marcin.gierczyk@us.edu.pl



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (<https://creativecommons.org/licenses/by-nc/4.0/>) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (<https://us.sagepub.com/en-us/nam/open-access-at-sage>).

one of the most competitive exams in the world (Cai et al., 2019). Thus, the gaokao participants compete for indexes of the best universities and a passport to career, social prestige, and material well-being. In 2020, 10.71 million people sat in the gaokao. The below literature review focuses on three essential components of the author's research: the importance of education tests, the history of the Gaokao exam, and women in education.

Review of pertinent literature

Educational tests. Even if the tests are not perfect (Heubert & Hauser, 1999), they are an integral part of any education level, regardless of the cultural context. They perform both a selective and stratification function. They are often criticized for their destructive influence on young people to reduce their identity (Herbert et al., 2017). The opponents of the tests claim that they cannot measure critical thinking (Harris et al., 2011), which is a vital competence in the post-trust era. Despite the criticism of the tests, some researchers point out that the tests are part of the liberal idea of meritocracy (Liu, 2013), which gives children a chance to compete fairly regardless of their origin status. The tests have actually allowed millions of people from disadvantaged groups to achieve educational success (Park, 2008). Therefore, in many countries, test results are seen as a way of emancipation for people from families who are low in the social hierarchy (Ayalon & Livneh 2013). Undoubtedly, the tests significantly changed the educational situation of women, which is supported by the mentioned arguments, namely the increase in the number of women studying, e.g., in China (Liu, 2017). One potential flaw with an overreliance on tests is that they may negatively affect students with distinctive talents, who are incapable of translating those talents into a standardized test. This way, they may end up deprived of access to higher education, even though they may have thrived in that environment. On the reverse, students who score well on the test may not necessarily possess other necessary nonacademic qualities (Wu et al., 2019).

The National College Entrance Examination. The Gaokao exam, also known as the National College Entrance Examination, is a large-scale competitive and selective test, determining which testers qualify for college. Its importance cannot be understated; it inadvertently affects elementary and secondary education as well, as schools may begin preparing students incredibly early. It first appeared in Chinese society in 1952 and resumed in 1977, after the Cultural Revolution and China's development into a socialist market economy (Liu & Wu, 2006). By 2006, sixteen of China's provinces had included province-specific questions, a decision that proved to be relatively unpopular and controversial (Wang, 2010). The Gaokao is considered among the most competitive globally, with a low passing rate relative to exams common in Western societies. In contrast to Western societies, which can use holistic evaluation methods, the Gaokao is typically the only criterion used. The students' total scores decide which of China's nearly 2000 colleges they gain admission to. China's colleges comprise three tiers: key universities, regular universities, and technical colleges. The main differences are based on ranking and programs' duration; however, attending a key university is seen as improving job prospects in a fiercely competitive job market (Li, 2012). The importance of this exam cannot be overstated. Some students feel such intense pressure that they study while hooked up to oxygen tanks (supposedly to improve concentration). At the same time, some use additional methods to skip their periods during exam week (Lua et al., 2018). The Gaokao creates a ripple effect by being one of the criteria used to determine whether a student attends a particular college. Preparations for the exam begin as early as primary school. Students spend their entire senior year preparing for the Gaokao. According to Ho Mok and Wu (2016), there exists a vast expanse between the possibilities of elite university graduates and non-elite graduations. This results in "madness" gaokao, in terms of the mental

state of both Chinese students and their parents, who are equally preoccupied with their futures, and even the mass media, which whips up a frenzied atmosphere during exam season (Gromkowska-Melosik, 2017b). Considering the Gaokao's supposed egalitarianism, the effects of gender on educational opportunity in China has attracted much interest. A student's choice of the university extends into their luck in the job market as well. According to research by Huang et al. (2015), the probability of a woman receiving a job offer compared to a man (when all other factors such as the school rank are equal) is lower for most majors. These difficulties in the labor market may eventually create a negative feedback loop to the educational process itself. Across the world, men earn more on average than women in both developed and developing countries. According to the 2020 Survey Report on the Status Quo of Chinese Women in the workplace & the overall salary of Chinese women in the workplace is 17% lower than men. The income gap is narrowing rapidly. The rapid rise in women & education in recent years is also why the pay gap has narrowed.

Women in higher education. In contemporary society, women's access to higher education has radically changed in nearly every country in the world (Liu, 2018; Marginson, 2016; Renn, 2014; Shao, 2016). Noting this change (erase). The authors may lead one to believe that women in higher education are no longer an issue requiring further study or discussion, as women can globally attend private or public coeducational institutions (Yangb & Shena, 2020). One such example is Oxford University, which on 7 October 2020 recognized its 100th anniversary of formally admitting women. Meanwhile, women in "China also had more opportunities to participate in higher education, reaching 50% participation in 2013, up from less than 30% in 1980" (Liu, 2017, p. 946). Although these numbers have increased, they still do not match up to Western numbers, and many potential students are not accepted into any universities, leaving them without the option of higher education (Lu, 2011). Much like the rest of the world, in the second half of the 20th century, China experienced a rapid expansion of its higher education system, notably experiencing large growth since the start of the 21st century (Wang, 2011). Wu et al. (2020) also found that gender inequality when accessing higher education decreased in elite education far more than in non-elite education. However, Cai et al. (2019) found that women are underrepresented in the top academic programs.

Methods/methodology

The purpose of this study was to examine how do Chinese female students from Top Universities in China perceive the preparatory period for the gāokǎo exam? This study uses interpretivism as its theoretical framework. This approach allows us to view individual experiences as socially constructed and reflect the multiple realities students inhabit (Glesne, 2011). It is equally important to note that these realities affect individuals' perceptions of their environment and the way they choose to interact with others (Glesne, 2011). Equally important, however, was phenomenology, which asks "what is the nature or essence of the experience of learning" (Van Manen, 1990, p. 10). For qualitative research interviews, phenomenology plays a guiding role in elucidating the mode of understanding (Brinkmann & Kvale, 2014). Our aim is not to create new theories and instead understand the collected cases and their relations. They interrelate to make a student's point of view regarding the gaokao exam. Ultimately, these studies seek to understand the societal reality the students live in.

This question guided the author inquiry:

Research Question: *How do Chinese female students from Top Universities in China perceive the gāokǎo exam and preparatory period for it?*

The present study made use of individual, semi-structured, in-depth interviews and open-ended interview questionnaires. The author attempted to see the world from the perspective of the respondents to unfold the meaning of their experiences and to uncover their lived world (Brinkmann & Kvale, 2014).

Participants

The authors made use of deliberate sampling, which is “defined as the selection of units concerning special purposes regarding answering the given research questions” (Teddle & Yu, 2007, p. 77). By using Linear Snowball Sampling, which is a non-random selection of respondents to the research sample. This method starts with one individual, who refers to another, and so on until an appropriate sample size is reached (Teddle & Yu, 2007). This type of selection method often acts as an efficient chain and is very helpful when conducting large-scale research in environments challenging for the researcher to reach. In deliberate sampling, its participants must have a trait or traits of interest to the researcher (Ritchie et al., 2003). The first criterion for being included in the study sample was to be a woman, second pass the gaokao exam, and third be a student of one of the top Universities in China. See Table 1 for student demographics.

Data collection

Two forms of data collection were used—a open-ended questionnaire (without a time limit and with unlimited space to answer the questions) and a 30-to-40-minute individual semi-structured interview. In accordance with APA Ethical Guidelines for Research (Campbell et al., 2010), students received *Student Consent Forms* with information about the purpose of the study, the procedure, voluntary participation, privacy and confidentiality and risks (there were no anticipated risks beyond those encountered in everyday life). The written information also included a statement, permissions, and student signatures.

Interview procedure

Interviews were conducted in the form of free statements during which the respondents were led to thematically specific narrative spaces in order to provide detailed and in-depth answers. The questions asked were open-ended. The interviews conducted were registered via recorders (with the respondents' permission) and then transcribed. Notes were taken throughout the research process to serve as auxiliary materials in grouping the collected data, combining it into broader categories, and identifying the interpretation bases of the phenomena recognized (Huberman & Miles, 2002).

Open-ended interview questionnaire procedure

The open-ended interview questionnaire included information about the family background (e.g., parent education level, siblings) and educational information (e.g., college and career goals) and six below questions. Via emails, the students received the open-ended questionnaire and Student Consent Forms to the students by email.

Questions:

1. When you hear gaokao, what comes to your mind?
2. How do you perceive the preparatory period time for gaokao exam?
3. How do you perceive gender equality/inequality in the gaokao exam?

Table 1. Student demographics.

No.	Gender	Age	University	Parents education	Year of study
1 ^a	F	20	Beijing Normal Uni	F – High school; M – Uni degree	3
2 ^a	F	20	Shanghai Jiao Tong	F – High school; M – Uni degree	3
3 ^a	F	19	Nankai University	F – Uni degree; M – PhD	2
4 ^a	F	20	Nankai University	M – Uni degree; F – Uni degree	3
5 ^a	F	20	Nankai University	F – Uni degree; M – Uni degree	3
6 ^b	F	20	Peking University	F – PhD; M – PhD	3
7 ^b	F	20	Beijing Normal Uni	F – Uni degree; M – High school	3
8 ^b	F	20	Nankai University	F – High school, M – No school	3
9 ^b	F	20	Shanghai Jiao Tong	F – High school; M – High school	3
10 ^b	F	20	Shanghai Jiao Tong	F – Uni degree; M – Uni degree	3
11 ^b	F	20	Nankai University	M – Uni degree; F – Uni degree	3
12 ^b	F	20	Nankai University	M – Uni degree; F – Uni degree	3

^aInterview face-to-face.^bOpen-ended interview questionnaire

4. How do you perceive the thesis that everyone is equal and has an equal opportunity for success regarding gaokao?
5. How did your gaokao results shape your further educational path?

Analysis

The process of analyzing the data encompassed two stages. The first stage was made up of a within-case analysis. During this analysis, every sample was first treated as a comprehensive case in and of itself. The second stage sought out thematic problems that emerged in the research through a thematic analysis across the cases (Braun & Clarke, 2006). The purpose was to seek out the central metaphor, tying together disparate passages and finding similarities within different cases. The analyses presented were created due to the respondents' statements being subjected to structural description and division into cohesive segments (problem areas) (Rowley, 2002; Thompson, 2000). Therefore, the analyses do not quote all responses given by the students. It cites only those that overlap with the needed information to the greatest extent. The sample selection thus expanded to the stage of presentation of research results (Flick, 2009).

Results

Based on analysis, two major themes emerged, which include (a) positive attitudes (b) negative attitudes which can be find by key words (see Table 2). These themes emerged out of the significant overlap in responses, which all pointed to similar ideas while still retaining individualistic views.

Preparatory period for gāokǎo exam

The current findings suggest that the students the Gaokao preparation time can be divided into two groups: positive and negative. Generally speaking, there were much more positive attitudes to the Gaokao exam preparation time. Moreover, perceiving this period was determined by factors such as attitude towards life, character traits, support from family, friends

Table 2. Summary of main themes and key words.

Themes	Key words
Positive attitudes	Feel fair about the opportunity Feel hopeful Feel accomplished Feel loved by your family Enjoy the time with classmates Expectations for the future
Negative attitudes	Reduced recreation time Feel unfair about educational resources and regional differences Anxiety about subject and choice

and peers, national characteristics and the school climate. These elements are shown in bold in the following statements:

*I don't agree that the college entrance examination will affect the lives of young people. On the contrary, I think that the college entrance examination is an **important turning point**. Every young person is thinking about the life he wants, the goal he wants to pursue, the importance of fairness, and learning and **parents communicate ideas**. With self-control, we can have the freedom to create creativity (Individual interview, No 1, July, 2019).*

*On the contrary, in **our high school we had a lot of cultural festival** when we could have fun and do what we want. You have to admit that repetition is really a good way to prepare for that exam (Interview questionnaire, No 11, July, 2019).*

*I think gaokao is a **way to develop yourself**. Even you don't like but you have to suffer. And it's life. You have to suffer something you don't expect. Gaokao is another make you adult. (Individual interview, No 6, August, 2019).*

*[...] during the period of preparing for the gaokao, I gained another kind of life pleasure, that is, the sense of accomplishment of making questions and getting high scores. As a Chinese student, the gaokao is also **a part of our youth**. In my opinion, if I did not take the college entrance examination, **I might feel that my life is not very complete**. (Individual interview, No 3, July, 2019).*

*The preparatory period for gaokao was a little tedious and hard, but **my parents, teachers and peers gave me a lot of support**. And being hopeful was happy. (Interview questionnaire, No 8, July, 2019).*

*Although the process to prepare for gaokao is a little boring and rigid, we can learn to improve our capability and something really inside ourselves much more better than just considering the joy of life. By the way, gaokao doesn't mean that we don't have time to play or enjoy the youth, **we can still play well and learn creativity by solving questions in gaokao** (Individual interview, No 4, August, 2019).*

*The joy of life depends on one's choice. For me, though during the preparatory time for gaokao **I have lost time for entertainment**, but I started to think about life and looking for courage made*

myself which I should relish. At the same time, I feel more love from my parents and friends (Interview questionnaire, No 9, July, 2019).

However, some participants were also upset at the loss of fun time, speaking generally:

Preparation for the college entrance examination for most young people, the daily life is to study, eat and rest. The amount of time involved in other forms of entertainment has been reduced correspondingly, and I believe that to a certain extent this will stifle the creativity and imagination of some teenagers. (Interview questionnaire, No 12, July, 2019).

*The grade of gaokao is almost the only thing that decides **whether you can attend a good university. There isn't time for them to do that.** The form of high school students' life is fixed. People don't think the joy of life or creativity is necessary compared with attending a good university.* (Individual interview, No 5, August, 2019).

*I ma mostly never touch my mobile phone during the third year in senior high school. It **indeed destroys our joy but not as seriously as they put forward.** We aren't supposed to relax when it's time for us to study hard.* (Individual interview, No 10, July, 2019).

*The preparatory period of gaokao almost took all spare time. And so, do my schoolmates. **It's true that we hardly have time for creativity or entertainment.** But that was our youth and some of us enjoy it.* (Interview questionnaire, No 7, July, 2019).

These statements fit into the image of the Chinese education system, which is based on two fundamental principles. First, as many researchers note, education in China is based on the Confucian principles of collective society (Yangb & Shena, 2020; Yu & Suen, 2005). These principles are contained, for example, in the high value of education, the belief that hard work can compensate for the lack of abilities. According to a survey (from Tencent News App, 43,000 students) of “What students hate most in the preparation stage”, unfair treatment by teachers accounts for 34.1%, public rankings and scores account for 20%, comparison between classmates accounts for 16.8%, parents are too lengthy for 16.1%, and other reasons account for 13% (Xiong, 2016). The attitude towards the teacher is also important here, as he is seen as a role model, a person who has unquestionable knowledge. Chinese society has developed a cult of learning as work, which is considered a moral duty of each student not only to himself, but also to the whole family. Secondly, the school is perceived as a place where ready knowledge and patterns are given, the teacher decides for the student what should be and what not, how to think and interpret facts. In some surveys, the question “What did you do when preparing for the gaokao? In this question, the tactics of taking questions accounted for 52.1%, the summary study method accounted for 42%, and the plan and goal of setting every day accounted for 39.5% (Xiong, 2016). It can seem that making a plan, doing questions like crazy, and constantly summarizing are the three magic weapons of preparing for the exam. And the college entrance examination is also continually improving some existing problems. On February 19, 2021, the Ministry of Education of China officially issued a notice on the recruitment of students for the 2021 National College Entrance Examination. The Ministry of Education said that the 2021 questions would strengthen students' overall development of morality, intelligence, physique, aesthetics, and work.

Test questions to optimize the design, enhance openness and flexibility, reduce rote memorization and the mechanical brush phenomenon.

For the respondents, preparing for the exam was actually intense. It cost them many sacrifices, but in retrospect, they say that the effort paid off, and learning also gave them a lot of satisfaction.

*Although preparing for the college entrance examination is a **protracted battle**, you will pay a lot for it, but now every time you think back, the efforts and perseverance of their own more beautiful, the memory of the past is also worth remembering, so on the whole **it is more satisfactory*** (Interview questionnaire, No 12, July, 2019).

*Indeed, **gaokao is hard work** to us students (you have to do some repetitive practice just the only one exam) but only experienced it can we get to know that concentration, diligence and stamina are treasure to us and it helps us build these qualities.* (Individual interview, No 1, July, 2019).

*I think it **gave me satisfaction**. First, I had good grades during my high school study, so I was not anxious about my scores. I'm relaxed about exams and rankings. I didn't give myself too much hard word to deal with. And I didn't looking forward to a high goal or hard achievements at that time, so I'm not nervous about or afraid of gaokao. What's more, I got along well with my classmates and I enjoyed the time chatting or playing with them. **It's memorable**.* (Individual interview, No 5, August, 2019).

*In my memory, **gaokao was a tired but happy thing**. Before the gaokao, I had to study all day that was **so tired** [...] family and friends encourage me [...] (Interview questionnaire, No 3, July, 2019).*

*I think the preparatory period for gaokao was **tough and tedious sometimes**, but it did gave **me satisfaction**. I was happy with the **support from my parents**. And in school we all studied hard, improving ourselves with our own efforts.* (Interview questionnaire, No 8, July, 2019).

The participants of the gaokao exam emphasize that depending on the point of view, the test itself can be viewed positively. A good result opens a new educational path in the selected university and thus impacts future life and professional success. Many respondents emphasize the sense of fulfillment, satisfaction, and happiness. This is related to meritocracy, which assumes that an individual's social status depends on his/her documented achievements (Gromkowska-Melosik, 2017a) and the state exam result. The diploma is undoubtedly a tangible proof of knowledge.

Equality and fairness

The current findings suggest that the students' perception of equality and fairness can be divided into two groups: positive and negative. Generally speaking, the test was seen as fair Equality. It is worth emphasizing that the gaokao exam is reformed every few years (Tan & Ng, 2018). The aim of the reform was so far to make the examination more open, democratic, fair, and diverse. Despite its shortcomings, the gaokao exam is viewed as fair, and its results provide a reasonable basis for placing different people in universities of varying prestige:

We are having the same opportunity to take the exam and we are in the same starting point. (Individual interview, No 5, August, 2019).

It's not absolute fair but I think it's equal. The rules of gaokao is strick and objective, and gaokao provide equal opportunity. The problem is about resource but not the system of gaokao. (Individual interview, No 1, July, 2019).

I think it is equal, but I don't think it has equal opportunity for success. (Individual interview, No 7, July, 2019).

[...] Gaokao is the equalest before there is a better way. And without gaokao we can hardly get a better education than the rich or the power. (Interview questionnaire, No 6, July, 2019).

There is no absolute fairness, but there must be relative fairness [...] All candidates face the same opportunities and enter the right school based on their individual abilities. (Interview questionnaire, No 10, July, 2019).

*Nothing is fair, and **gaokao is relatively one of the most fair things in China**. As for success, nothing can determine a person's future, even gaokao. This is important though, the role of gaokao cannot decide everything I think. (Individual interview, No 4, August, 2019).*

***I think the gaokao is already relatively fair in China**, because we have such a large population, and the results of the gaokao can allocate us to which universities to attend. (Individual interview, No 3, July, 2019).*

*[...] Gaokao system is the **equalest way** at present. Those who can't adapt to it have their ways to get what they want. (Interview questionnaire, No 11, July, 2019).*

To some extent, gaokao is fair. They gave everyone the chance to change their life. But there are also some unreasonable aspects. It causes some discriminations. (Interview questionnaire, No 8, July, 2019).

However, universities are still encouraged to some extent to consider criteria outside of the test results themselves, including such things as citizenship and morality, non-academic awards, and teacher recommendations (Gu & Magaziner, 2016) which is what the statement below draws attention to:

*It depends on the district because some province **has** different papers and different grades line to enter one university. But **I think it's** relatively fair in one province. Why do I say relatively? Of course, different districts have different resources of education. Those students born in Beijing certainly have better teachers the idea of education is more advanced. As you see, the difference is too hard to eliminate, almost in every area around the world. So what they authority could do is to modify the system. (Individual interview, No 2, July, 2019).*

Interesting observations appear in the statement below:

*My opinion is that gaokao **is not definitely equal**, the test includes the luck and some unpredictable elements. By the way, though gaokao is crutial for us students to enter a high school, it is a test only. Passing it doesn't mean that you've got the aisle to success. There are citizens obtain their dreams not preparing for the test. In fact, the gaokao divided students by ranking students to different rank of universities, which actually played an important role in our life, but not depend our lives. (Interview questionnaire, No 4, August, 2019).*

[...] *If someone works hard, they can get better results in most cases. But I have to say that there is something unequal as well, though a little.* (Interview questionnaire, No 8, July, 2019).

The respondents agree with the thesis that the gaokao is a fair form of examination and there is no better form of checking knowledge than the test in this form. All students are equal and have identical opportunities. However, there are inequities in the college entrance examination. The injustices mainly occur in the regional inequality. According to the research findings, there are mainly: 1. Serious localization of university enrollment; 2. Profound unfairness of admission standards; 3. Injustice to candidates from other places (Lu, 2011)

Society will never be fair, the college entrance examination for other things in society, is really relatively fair, after all, there is no difference without comparison. (Interview questionnaire, No 12, July, 2019).

I don't think it's totally fair, just like any other system. Only one exam could decide where you go, what if I was sick at the moment? (except for some unique students who would directly get the application through Olympic competition) However, I don't think there is a system more fair than gaokao. There are pretty too many students in senior high school and it's a heavy load to use grade points of three years as criterion and corruption is a problem. (Individual interview, No 1, July, 2019).

In my opinion, gaokao is not fair. The rich hold better educational resources. When gaokao requires all the students the same standard, it's definitely not fair to the poor. Gaokao has specific, standardized and objective requirement, and provides us the same opportunities for success. It seems fair apparently, but the most important thing is that students started at different levels. But I think it's the best way at present. Because of the large population of China, it will cost a lot of resource to excite other more fair methods. At least gaokao is relative fair and some specific policies have been applied to some groups of people. (Individual interview, No 5, August, 2019).

Although I admit that it is partly unfair, especially comparing the difference between some students in megacities and the ones in some other provinces, I think the difference can be overlooked totally, for in Nankai and some more excellent colleges which requiring students' relatively high scores to be permitted into them, students' competence and capability cannot be distinguished by the rigid test. Thus, the phenomenon in my class is that the students who can be permitted in Nankai with a relatively low-grade show nothing worse than other students, and they even perform better in thinking or other aspects. (Interview questionnaire, No 9, July, 2019).

The following statements may arise from that in China, and there is a belief - both on the level of education policy and public awareness - that everyone is equal in the face of the points system and the number of points. However, critics say in this context that we are dealing here only with "procedural equity" (Mendes & Srighanthan, 2009). The above statements can be also applied to what Liu (2013) indicates that in the gaokao there is less correlation between the (potential) success of an individual and his socioeconomic background (family) than between that success and place of residence, namely "the Gaokao selection system appears to be more meritocratic in relation to socioeconomic background than in relation to geographical origins" (p. 883). This phenomenon is undeniable in the national key universities. Take Peking University as an example. In the 2009 enrollment plan, more than 100 indicators in Beijing, and only more than 400 were in the other 30 provinces and cities. The local indicators in Beijing accounted for about 20% of the total hands. The "985 universities"

supported by the state, such as Fudan University, Zhejiang University, Wuhan University, and Nanjing University, recruit 30 percent of their students locally. Some even enroll as high as 50 percent (Lu, 2011).

Further educational path

The gaokao exam shapes the educational path of young students, which reflects in the respondents' statements. In his research exploring how Chinese students see the relationship between the gaokao and access to university, Heger (2017) found that the effort to enter university is seen as a glorious topic from the perspective of the students. This was also shown in the statements below:

[...] It also taught me lots of lessons like how to be a polite, diligent, creative, rigorous and moral person. And the great friends I made here would support me and be my side in the future, just like the good habits we got here. (Individual interview, No 2, July, 2019).

Sometimes I am regretful cause I didn't get what I want . I try to make the difference between me and the others from prestigious school smaller. To get more certifications that I need for my future career. It would affect your life obviously but you can't let it to change what you always want to do. (Interview questionnaire, No 7, July, 2019).

*We use gaokao results to choose school and major. In other words, what we will do in the **future depends on the results**. We hardly have opportunities to change the results. It costs a lot for students to start again. So once we the results, many things are fixed. **Gaokao is not the only way to change life, but it is the easiest way**. Tiring but easy. (Individual interview, No 5, July, 2019).*

*It got me into a key university, and in a way I'm a little higher than some people's platform. It means **I have more opportunities**. Of course, people who are better than me, they have more opportunities. (Individual interview, No 3, July, 2019).*

*I am **very grateful** to gaokao and will cherish the memory. (Interview questionnaire, No 8, July, 2019).*

Considering that the national gaokao exam result is one of the criteria for university admission and determines how far the average Chinese citizen can go in terms of career. The future of students depends on the results of the exam. Often the exam is a chance to leave your place of residence, change your social status. The emergence of the new gaokao¹ also makes the students' anxiety content change from "one exam determines the whole life" to "one chooses the whole life." There are many "conflicts" in choosing the target university and determining the selected subjects, making the students feel anxious.

Gender and the gaokao exam

An undoubted advantage of the gaokao is that gender does not matter when evaluating the exam. Everyone has the same chances, and a good result depends only on diligent work and proper methods.

*I fully agree the **girls and boys have the same opportunities** to get a great result in gaokao. Different personalities depend on the way people were educated and the environment they grown up. (Individual interview, No 5, August, 2019).*

***I don't think there will be much difference**, although many people think that boys are good at science and girls are good at arts. But I think a lot of things are decided by people themselves. (Interview questionnaire, No 12, July, 2019).*

***I don't think there is difference**. The result depends on the extent of your hard work and your brain. (Interview questionnaire, No 11, July, 2019).*

*We choose science or liberal arts during high school. Gaokao of Science contains Chinese, English, more difficult mathematics, physics, chemistry and biology, while Liberal arts contains the same Chinese, English, but simpler mathematics, history, politics and geography. There're always more boys in Science and more girls in Liberal arts. **But the gender of top students in each subject can be equally a boy or a girl.** (Individual interview, No 5, August, 2019).*

*I don't think whether a person can do well in the gaokao has much to do with gender. **I don't think boys and girls have much different**, just that they may think differently. I think good grades depend more on your own effort. (Individual interview, No 1, July, 2019).*

[...] Girls and boys have their own advantages in gaokao. If they study hard similarly, they have the same opportunities to get a great result. (Interview questionnaire, No 8, July, 2019).

Discussion

The Gaokao is often called the most crucial test of students' lives, as shown by the conducted analysis. In students' statements, we can also notice the thesis put forward by Heger (2017) that students describe their entrance to university as a significant turning point. And some surveys show that parents with different incomes have different attitudes toward the gaokao. High-income parents pay more attention to the life experience of attending college through the gaokao, which can broaden their knowledge and establish three concepts. Low-income people, on the other hand, think the gaokao is very important. The surveys in recent years have shown that 16 percent of examinees sleep less than five hours a night, and 96.9 percent sleep less than eight hours a night. Lack of sleep has become a problem for middle school students nationwide (Xiong, 2016).

Although China still has to grapple with an educational system that is sensitive to institutional corruption, the Gaokao is seen as an equitable method of selection (Ross & Wang, 2010), which was shown by the conducted analyzes. Despite observable points of unfairness – some families can move to areas with more favorable admission conditions or send their children abroad to study – the examination itself is treated as fair. The investigation on the primary motivation of high school students to study overseas shows that some of them choose to study overseas because they do not adapt to the domestic education model and educational environment (Wu, 2014). You and Hu (2013) also note that the gaokao is seen as a fair method of competition in China since the decision is based on nationally-comparable scores. Wu et al. (2019) note that although this method is seen as relatively fair and equitable, it has far-reaching consequences for primary and secondary education, leading to an exam-oriented teaching method. Many respondents' perceptions of the gaokao may have been related to the fact that their own parents were highly educated. As found by Zhang and Chen (2014) “parental educational level greatly influences higher education opportunity. Parents with a junior high education level have higher odds than those with primary school education or below” (p.13). According to the research conclusion of Xing Hui Tian in 2014, said that grade

three students are in the moderate and severe level of test anxiety. The test anxiety of girls is slightly higher than boys; the anxiety level of ordinary middle school is somewhat higher than critical middle school. Our interview for this article also reveals these problems (Tian, 2014).

The students did not notice the problem of gender inequality in the case of the gaokao exam, only paying attention to the differences in results obtained in different scientific disciplines, which is also confirmed by the results of analyzes carried out by Cai et al. (2019). In science, men outperform women at almost all points of the test score distribution, and the male advantage becomes even more pronounced during the Gaokao. Due to the stereotype, “male discipline” and “female discipline” appear in higher education. Scholars at home and abroad regard this phenomenon as “gender segregation of discipline and specialty,” which is joint worldwide.

Conclusions

Along with the greater access to higher education, the number of people joining the gaokao (voluntarily assumed) has increased. Gaokao participants compete for top university indexes as a gateway to career, social prestige, and material well-being. Despite the case study method being frequently criticized by the representatives of currents associated with the positivist paradigm, the method finds increasingly wider application in empirical studies and brings cognitively valuable effects (Coleman et al., 2007). In this study, the qualitative approach made it possible to gain access to data on the students' experiences in the context of complex environmental, situational, and structural conditions that result in cognitively beneficial effects. The preparation time for the exam and how students prepare for the exam in COVID-19 epidemic is also assessed. According to the interview and related research, we can see the following points: A) Chinese people still attach great importance to the college entrance examination. Students can treat the college entrance examination with a correct attitude when they feel pressure. B) China has constantly been correcting and perfecting the problems in the college entrance examination, such as the emergence of the new college entrance examination. However, it has not solved all of the issues. C) Anxiety exists among three senior students. Universities and relevant departments should effectively adjust the anxiety points, and parents and teachers should give them support and attention. D). Unfairness exists in the college entrance examination. Still, it is not gender inequality, but the imbalance of educational resources between regions and the difference in admission rate.

Limitation

In studies, like this one, based on deliberate sampling, the interpretation of results is limited to the cases studied and generalizations are not valid (Tongco, 2007). The authors are fully aware that qualitative studies, unlike quantitative studies, are considered “soft, descriptive, ‘feminine,’ ‘microscopic,’ less exact/precise/objective/rigorous, systematic (...) and non-scientific” by many (Vissa, 2007, p. 378). The study results are not representative of any whole population, nor can they be generalized; the knowledge obtained concerns merely the analysed phenomenon in the specific context and cannot be “transferred” (Shenton, 2004). Future research should include a comparative study among male and female students from the Top Universes in China.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Note

1. One of the significant measures deployed the reform, the implementation opinions on September 4, 2014, which is also the most comprehensive and systematic reform of the examination and enrollment system since the restoration of gaokao. On April 23, 2005, Hebei, Liaoning, Jiangsu, Fujian, Hubei, Hunan, Guangdong, and Chongqing issued the implementation plan for the comprehensive reform of the college entrance examination. The new “3 + 1 + 2” gaokao model will be tested in eight provinces and cities, starting with first-year high school students entering in the fall of 2018.

References

- Ayalon H., & Livneh I. (2013). Educational standardization and gender differences in mathematics achievement: A comparative study. *Social Science Research*, 42(2), 432–445. <https://doi.org/10.1016/j.ssresearch.2012.10.001>
- Braun V., & Clarke V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Brinkmann, S., & Kvale, S. (2014). *InterViews: Learning the craft of qualitative research interviewing* (3rd ed.). SAGE.
- Cai X., Lu Y., Pan J., & Zhong S. (2019). Gender gap under pressure: Evidence from China's National College Entrance Examination. *Review of Economics and Statistics*, 101(2), 249–263. https://doi.org/10.1162/rest_a_00749
- Campbell, L., Vasquez, M., Behnke, S., & Kinscherff, R. (2010). APA Ethics Code commentary and case illustrations. American Psychological Association.
- Coleman, L. J., Guo, A., & Dabbs, C. S. (2007). The state of qualitative research in gifted education as published in American journals: An analysis and critique. *Gifted Child Quarterly*, 51(1), 51–63. <https://doi.org/10.1177/0016986206296656>
- Flick, U. (2009). *An introduction to qualitative research* (4th ed.). SAGE.
- Glesne, C. (2011). *Becoming qualitative researchers: An introduction* (4th ed.). Boston, MA: Pearson.
- Gromkowska-Melosik, A. (2017a). Testy edukacyjne. Studium dynamiki selekcji i socjalizacji [Educational tests. A study of the dynamics of selection and socialization]. UAM Publishing House.
- Gromkowska-Melosik, A. (2017b). Gaokao i procesy stratyfikacji społecznej w Chinach [Gaokao and Processes of Social Stratification in China]. *Studia Edukacyjne*, 44(2), 45–63. <https://doi.org/10.14746/se.2017.44.3>
- Gu, M., & Magaziner, J. (2016). The Gaokao: History, reform, and rising international significance of China's national college entrance examination. *World Education News & Reviews*. <http://wenr.wes.org/2016/05/the-gaokao-history-reform-and-international-significance-of-chinas-national-college-entrance-examination>
- Harris, P., Smith, B. M., & Harris J. (2011). *The myths of standardized tests: Why they don't tell you what you think they do*. Rowman & Littlefield Publishers.
- Heger, I. (2017). Understanding the persistence of China's National College Entrance Examination: The role of individual coping strategies. *Berliner China-Hefte/Chinese History and Society*, 49, 113–133.
- Herbert J. W., Stone, J. E., & Phelps, R. P. (2017). Kill the messenger the war on standardized testing. Routledge. <https://doi.org/10.4324/9780203787755>
- Heubert, J., & Hauser, R. (1999). *High stakes: Testing for tracking, promoting, and graduation*. National Academy Press.

- Ho Mok K., & Wu, A. M. (2016). Higher education, changing labour market and social mobility in the era of massification in China. *Journal of Education and Work*, 29(1), 77–97. <https://doi.org/10.1080/13639080.2015.1049028>
- Huang, N., Tan, Y., & Feng, S. (2015). Employment situation of university graduates and gender differences—An empirical study based on employment data of a university. *Economic Science*, 37(4), 116–128.
- Huberman, M., & Miles, M. B. (2002). *The qualitative researcher's companion*. SAGE.
- Li, H., Meng, L., Shi, X., & Binzhen, W. (2012). Does attending elite colleges pay in China? *Journal of Comparative Economics*, 40, 78–88. <https://doi.org/10.1016/j.jce.2011.10.001>
- Liu, H., & Wu, O. (2006). Consequences of college entrance exams in China and the reform challenges. *KEDI Journal of Educational Policy*, 3(1), 7–21.
- Liu, Y. (2013). Meritocracy and the Gaokao: A survey study of higher education selection and socio-economic participation in East China. *British Journal of Sociology of Education*, 34(5–6), 868–887. <https://doi.org/10.1080/01425692.2013.816237>
- Liu, Y. (2017). Women rising as half of the sky? An empirical study on women from the one-child generation and their higher education participation in contemporary China. *Higher Education*, 74, 963–978. <https://doi.org/10.1007/s10734-016-0102-0>
- Liu, R. (2018). Gender-math stereotype, biased self-assessment, and aspiration in STEM careers: The gender gap among early adolescents in China. *Comparative Education Review*, 62(4):522–541.
- Lu, F. (2011). Analysis of regional equity in matriculation: From the perspective of the college admission system. *Akademy*, 4, 81–85.
- Lua, Y, Shi, X., & Zhongb, S. (2018). Competitive experience and gender difference in risk preference, trust preference and academic performance: Evidence from Gaokao in China. *Journal of Comparative Economics*, 40, 1388–1410. <https://doi.org/10.1016/j.jce.2018.05.002>
- Marginson, S. (2016). High participation systems of higher education. *Journal of Higher Education*, 87(2), 243–271.
- Mendes, E., & Srighanthan, S. (2009). *Confronting discrimination and inequality in China: Chinese and Canadian perspectives*. University of Ottawa Press.
- Park, H. (2008). The varied educational effects of parent-child communication: A comparative study of fourteen countries. *Comparative Education Review*, 52(2), 219–243. <https://doi.org/10.1086/528763>
- Renn, K. A. (2014) *Women's colleges and universities in a global context*. Johns Hopkins University Press.
- Ritchie, J., Lewis, J., Elam, G., Tennant, R., & Rahim, N. (2003). Designing and selecting samples. In J. Ritchie, J. Lewis, C. M. Nicholls, & R. Ormston (Eds.), *Qualitative research practice: A guide for social science students and researchers* (pp. 111–135). SAGE.
- Ross, H., & Wang, Y. (2010). The College Entrance Examination in China: An overview of its social-cultural foundations, existing problems, and consequences. *Chinese Education & Society*, 43(4), 3–10. <https://doi.org/10.2753/CED1061-1932430400>
- Rowley, J. (2002). Using case studies in research. *Management Research News*, 25(1), 16–27. <https://doi.org/10.1108/01409170210782990>
- Shao, C. (2016). Education expansion and gender difference in education attainment (1978–2008). *Youth Studies*, 401, 10–19.
- Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22(2), 63–75. <https://doi.org/10.3233/EFI-2004-22201>
- Tan, C., & Ng, C. S. L. (2018) Assessment reform in Shanghai issues and challenges. *International Journal of Educational Reform*, 27(3), 291–309. <https://doi.org/10.1177/105678791802700304>
- Teddlie, C., & Yu, F. (2007). Mixed methods sampling: A typology with examples. *Journal of Mixed Methods, Research*, 1(1), 77–100. <https://doi.org/10.1177/1558689806292430>
- Thompson, P. (2000). *The voice of the past: Oral history*. Oxford University Press.
- Tian, X. (2014). *The study on the connections of senior high students' achievement motivation academic burnout and examination anxiety* (Master's Thesis). Hebei Normal University.

- Tongco, D. C. (2007). Purposive sampling as a tool for informant selection. *Ethnobotany Research and Applications*, 5, 147–158. <http://doi.org/10.17348/era.5.0.147-158>
- Van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. New York: SUNY Press.
- Wang, H. (2010). Research on the influence of College Entrance Examination policies on the fairness of higher education admissions opportunities in China. *Chinese Education & Society*, 43(6), 15–35. <https://doi.org/10.2753/CED1061-1932430601>
- Wang, H. (2011). Access to higher education in China: Differences in opportunity, *Frontiers of Education in China*, 6(2), 227–247. <https://doi.org/10.1007/s11516-011-0130-6>
- Wu, L., Yan, K., & Zhang, Y. (2020). Higher education expansion and inequality in educational opportunities in China. *Higher Education*, 80, 549–570. <https://doi.org/10.1007/s10734-020-00498-2>
- Wu, X., Li, Z., & Wang, N. (2019). Independent Freshman Admission Program (IFAP) in China's higher education: Evidence from three national elite universities in Beijing. *Chinese Sociological Review*, 51(1), 1–28. <https://doi.org/10.1080/21620555.2018.1452608>
- Wu, X. (2014). *Study on the phenomenon of high school students studying abroad* (Master's Thesis). Shanghai Normal University.
- Xiong, T. (2016) *Survey report on Chinese people's attitude towards Gaokao*. <https://news.qq.com/cross/20160606/2b04WD4l.html>
- Yangb, J., & Shena, W. (2020). Master's education in STEM fields in China: Does gender matter? *Higher Education Policy*, 33, 667–688.
- You, Z., & Hu, Y. (2013). Walking a policy tightrope: The dilemma of balancing diversification and equality in Chinese College Entrance Examination Reform. *Higher Education Policy*, 26, 309–324. <https://doi.org/10.1057/hep.2013.3>
- Yu, L., & Suen, H. K. (2005). Historical and contemporary exam-driven education fever in China. *KEDI Journal of Educational Policy*, 2(1), 17–33.
- Zhang, Z., & Chen, Q. (2014). The expansion of higher education admissions and the gender equalization of higher education opportunity: An empirical study based on Chinese General Social Survey (CGSS2008) data. *The Journal of Chinese Sociology*, 1, 1–19. <https://doi.org/10.1186/s40711-014-0001-7>
- Zhaopin Limited in cooperated with Babytree Group. *Report on the status quo of Chinese Women's Workplace in 2020*. <https://www.dydata.io/datastore/detail/1954074337304776704/>